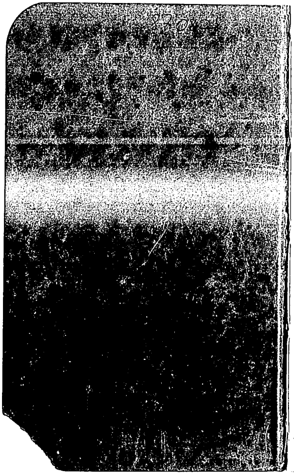
Notebook, PN-87-08-28

This pocket notebook was begun by Edison on August 28, 1887. The only other dated entry is for February 18 (p. 17). The first entries are concerned with wax phonograph cylinders. On the following pages are several notes and drawings regarding lamp filament experiments and notes from the *Dictionary of Chemistry* by Henry Watts. The book contains 39 numbered pages.

Blank pages not filmed: 28-39.



Filed: D 1887 "Phon. - Record - Manuf." 6-1

Phonograph

Aug 28 1887

Try soap cylinder & after indentation harden with an acid

Try gum Camphor as a base —

Mix Kaolin with Vasaline

Mix Kaolin with glue water —

Kaolin with boiled Linseed —

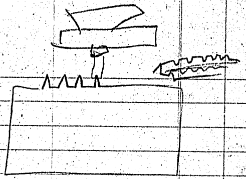
Soap cylinder coated
thin glue –

Kaolin made plastic
with water & put around
cylinder –

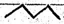
Venice turpentine
as a softener –

Canada Balsam
as a softener –

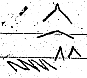
Vasaline with Paraffin
to soften –

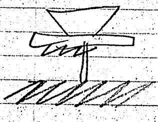


Cut cylinder thus with
Extra tool - then make
a Knife Edge recorder



This shape so needle will
record hiss easy but
~~low~~ great amplitudes
less easily. Experimenting
will develope proper
shape for perfect articulation





See how thin wax
beeswax can be squirted
into sheet say .002
thick & use on cylinder
like tin foil - might
add Rosin to harden it
if at 1st it dont work

How thin can sheets
of glue be made by
squirting + pouring
on glass — greased
freezing —

See if Vulcanized fibre
Can be drawn through
Saphire dies —

Have Ott draw
some Agave - Amazon
Bamboo + Bast — +
Palm + have them
Carbonized see how look
under Micros

Try Napthaline as hardner
Anthracene
Paranthacene
Pyrene
Chrysene
Picene
Benzerythrene MP 308°c
Carbopetrocene 268
Chlorinated Toluene -
Heptachloranthracene MP.
Benzoic acid 119c

add to Reg phono wax
as much of following as
they will take up →
Kaolin - Chalk. Oxide
Zinc, Talc, plumbago
Carb Magnesia
Crude Lamp black,
to prevent expansion -
MP 153 c ————→
350 c
Try that Gum amalgam
as hardner

Napthalene dicarboxylic
acid not fusible at 300
formula - $C_{12}H_8O_4$ —
Like a Carbohydrate — //

Triacetyl Cellulose
$C_{12}H_{16}O_8$ – MP 232
Perhaps this can be used as 17
or regenerated to film.

Isodioxystearic acid
Melts 126 C – phenomena

a 17 – Formoguanamine
$C_3H_5N_5$ –

Anhydroxalanilide.
$C_{14}H_{10}N_4$ not fusible at
300 C

Phenylnaphthyl Carbazole
$C_{16}H_{11}N$ MP 300 C

Dianthramine
$C_{28}H_{19}N$. not fusible 320 C

Octochlorphenylene Oxide
$C_{12}Cl_8O_2$ MP 320 boils
at Hg

Perchlortriphenylamine -
$C_{18}Cl_{15}-N$. not fused at 270 — perhaps these Cl & Cl N Compounds can be mixed with powdered C & squirted, only Cl & N go off as there is no O or H to volatilize C.

Cyanuric Bromide
Mp above 300°
$C_3Br_3N_3$
Pentabrombenzonitril
C_7Br_5N - mp above 300

Phosphorus Tricyanide.
C_3N_3P – mp. 203 C,

Wax of Ficus gummiflua
used in Java for illuminating
Brown & brittle. Melts bet
60 & 70 c

18 Feby – See if Carbon
Cannot be deposited
Electrolytically from
a Carbon Chloride or
a Nitrated Hydrocarbon

Naphthionic acid
watts - 17 - Leaves a
very large carbon residue on
burning

Nitride of Niobium
Conducts E, only acted on
by Mixture Hydrofluoric &
Nitric A,

John Ott to prepare
for Gore Force enough
Each Kind following metals
to make 6 lamps each
Kind 15/1000 -
Gold - Tin, Lead, Iron
Steel, Cast iron, Nickel
Cobalt, German Silver
Brass, Cadmium, Silver

platina, in

Solder - Aluminum
Magnesium - Copper,
Molybdenum
Glucinum
Lanthanum
Cerium
Bring these up in Vacuum
note phenomenon &
Melting point, ampere
Light Resistance & other
phenomenon do this by
Lifting pump in
Gal Room

Rig Up Induction Coil
to make Nitric Oxide &
fix in Soda - etc

Oleate of Mannityl

Waxy mass nearly colorless which becomes soft & tenacious at gentle heat — formed by heating oleic a & mannite & sealed tube Watts 196.

Oxalate of Calcium is a promising thing for Insulation. Get some —

Put wide splints of bamboo in Aniline Violet in Water to Soak for months ditto in alcohol — Ditto Asphalt in Turpentine — for Kruzi Manilla Rope in wood tar thin — for months —

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also bamboo filaments in very weak Hydrofluoric a sort 6 months try for ash

Mannitic Palmitate
phono cylinder Watts
335

Try dissolving Carnauba
into 2 waxes by alcohol
Watts 337 - under palm wax

ask Batch if he tried
the Napthalene on bearings
& to put the ideas generated
him in Reg books

English - Pasto - Resin
Elegumot for insulation
from SA - 357 Watts
Vol IV

Pectic acid in cold water
dries horny tough suitable
cheap - IV Watts 367
possibly good 17

Pectates of alkali
metals Sol H_2O
Rest insoluble &
gelatinous IV. 368

Aniline Oil acted on
by acrolein, dries up
to a Varnish - IV Watts
457

Phosphite of Chromium
dry powder which
gives off pure H on
heating - IV Watts 529

These phosphites
are good for dif
Lamp Residuals

Phosphite Lead gives
pure H & phospHd H.

Hexmetaphosphate Lead
precip becomes resinous
on standing Cakes together
IV Watts 566

Phosphate of Titanium
dries up to Gummy
Mass insol in H_2O

IV Watts 584